WondeX SPT100 Series

Protocol Document

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1. Introduction to WondeX SPT100 Protocol Document:

This document describes the protocol of the WondeX SPT100 devices. This document is used for all communications information between the base station/controller center and the SPT100 devices. The document includes command syntax with full acknowledgement of sending/receiving messages upon request, also the features/functionalities of each command. Hence, this document covers all information which you need to design/build application/software that uses the SPT100 as the devices.

2. Version History:

Version	Description	Supported Firmware Version	Supported Hardware Version
1.00	Initial commands	V0.006 or above	V1 or above
1.01	Modified Report ID Description	V0.006 or above	V1 or above
1.02	Added hardware version information to the $WP+VER command	V1.002 or above	V1 or above
1.03	Modified the effective range for Sync. message	V1.002 or above	V1 or above
1.04	Added querying number of logs in the memory for $WP+DLREC command	V1.003 or above	V1 or above
	Modified the length of GSM SMS alert messages for $WP+EMOV and $WP+EMSMS command	V1.003 or above	V1 or above
	Modified the command format for $WP+PSM (Power Saving Mode): - adding the “power down delay” and “Sleeping Priority”) - Add mode 2 for deep sleeping mode	V1.003 or above	V3 or above
1.05	Add the $WP+ROAMING command	V1.003 or above	V3 or above
1.06	- Correction of the Sync header definition - Add “CommSelect” and “Heading” conditions for the $WP+TRACK command - Add “Heading” condition for $WP+REC command	V1.006 or above	V3 or above

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3. Related Documents:

1. SPT100 Operation User Manual.

4. Syntax of "$WP" Commands:

- In order to successfully communicate with SPT100 device, the "$WP" or "$wp" prefix is required when issuing command and the <CR> is required for terminating the command line. Throughout this document, the <CR> char is omitted intentionally.
- The response of the command is usually followed by the <CR><LF> in the end of responding message. Throughout this document, the <CR><LF> chars are omitted intentionally.
- There are two types of the commands and responses will be seen through this documents as following:

1. Two types of command acknowledgement:

Ex 1: Issuing commands (configure the parameters for a command):

Issuing command:

$WP+<Command>+<Tag>=<Password>,<Para>,<Para>,<Para>,….<CR><LF>

Returning acknowledgement:

$OK:<Command>+<Tag>=<Para>,<Para>,<Para>,….<CR><LF>

Ex 2: Querying command parameters (read command parameters):

Issuing command:

$WP+<Command>+<Tag>=<Pwd>,?<CR><LF>

Returning acknowledgement:

$OK:<Command>+<Tag>=<Para>,<Para>,<Para>,<Para>….<CR><LF>

2. Ask for positioning information:

The returning positioning string (for $WP+GETLOCATION or $WP+TRACK) will **NOT** include the "+<command>+<Tag>" in the beginning of the string message. The positioning data will be displayed as described in the chapter 6.

Please note:

All characters of returning acknowledgement will be in upper case.

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- Entering a Series of $WP commands on Separate Lines:

  In order to successfully enter series commands through separate lines, a "pause" is suggested to add between each command (preceding and following commands) until the final responses appears such as "$OK:<Command>". This action will avoid sending too many $WP commands at the same time but without receiving the responses for each issuing command to ensure the device receives all command correctly and successfully.

- Default parameters for each command are underlined in this document for reference.
- There are two types of data transmission formats
  - Binary format:
    For Synchronization message.
  - ASCII format:
    for all data transmission except the Synchronization message.

5. Supported Communication Types:

The SPT100 device supports GSM frequency of 850MHz, 900MHz, 1800MHz, and 1900MHz. The device could be communicated with the base station via several communication ways such as following:

- Direct connection (via RS232 communication port): Auto-adjustable baud rate.
- GSM SMS messages (Peer to peer and TCP/IP network)
- GSM CS Data (GSM Circuited Switch Data): Reserved
- GPRS UDP: Static IP address is required for controller center software.
- GPRS TCP/IP: Static IP address is required for controller center.

Please note:

SPT100 currently does not support CDMA communication.

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6. Parameter Format for Returning Messages:

The report string includes a series parameters indicating as following:
Unit ID, DateTime, Longitude, Latitude, Speed, Heading, Altitude, Satellite, Report ID, (Mileage)

Format for each returning parameters:

Unit ID: The ID of the device. (Maximum length is 10 digits)

DateTime: YYYYMMDDhhmmss (GMT)

Longitude: WGS-84 coordinate system

Latitude: WGS-84 coordinate system

Speed: 0~65535 km/h

Heading: 0~360 degrees

Altitude: Parameter column Reserved, currently showing '0'.

Satellite: 0~12

Report ID: xxx. Different report ID indicates different meaning of each returning message, *Please refer to appendix for detailed description.*

Please Note:

- **The above information is only for the returning string with "Report ID" parameter.**

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7. Command List of WP Commands:

Command	Description
$WP+UNCFG	Set/Read unit ID, Password, and PIN Code of the SIM card
$WP+COMMTYPE	Set/Read device communication type and its parameters
$WP+ROAMING	Enable/Disable GPRS roaming function
$WP+GETLOCATION	Get current position of the device
$WP+TRACK	Enable/disable/read tracking function to the device
$WP+REC	Enable/disable/read logging function to the device
$WP+CLREC	Erase all logging data from the memory of the device
$WP+DLREC	Download entire/selective logging data from the memory of the device
$WP+SPDLREC	Stop downloading logging data from the device.
$WP+REBOOT	Restart up the device
$WP+RESET	Reset all parameters to the manufactory default settings
$WP+PSM	Enable/disable “Power Saving Mode”
$WP+SETEVT	Enable (set)/disable/read user defined Geo-fencing event(s)
$WP+CLEVT	Clear the user defined Geo-Fencing event(s)
$WP+IMEI	Query the IMEI number of the internal GSM module
$WP+SIMID	Query the identification of the SIM card
$WP+VWT	Activate Voice monitoring function
$WP+TEST	Device hardware diagnostic function
$WP+VER	Query the current firmware version.
$WP+NMEA	Enable/disable outputting GPS strings via serial port (NMEA-0183 format)
$WP+SPD	Enable/disable/read over-speed report
$WP+EMOV	Enable/disable unauthorized movement
$WP+EMSMS	Set the emergency contact number for sending emergency GSM MSM messages
$WP+QDSET	Set the quick dial number for function keys.
$WP+SETTZ	Set the time zone information

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8. Command Description:

$WP+UNCFG		
Description	Execute this command to configure the unit ID, unit password, and PIN code of the SIM card.	
Format	Write	$WP+UNCFG+[Tag]=[Password],[Unit ID],[New Password], [PIN code]
	Read	$WP+UNCFG+[Tag]=[Password],?
Response	$OK:UNCFG+[Tag]= [Unit ID],[New Password],[PINCODE]	
Error Response	$ERR:UNCFG+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Unit ID	Device identification number. The maximum length is 10 digits. Only integer can be used. Default unit ID is 1000000001 **Note**: The most left digit is reserved in which must be ‘1’.
	New Password	New password of the unit
	PIN Code	The PIN Code of the SIM card. The effective range is 4 to 8 digits. 0: Disable
Example	Ex: Issue command: $WP+UNCFG=0000,1000000002, Response: $OK:UNCFG=1000000002,	
Note	The SIM card will be locked by the TELCO if enter incorrect PIN code for 3 times then the PUK code is required. Please contact the local TELCO to unlock the SIM card.	

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$WP+COMMTYPE		
Description	Execute this command to set the primary communication type and its related parameters.	
Format	Write	$WP+COMMTYPE+[Tag]=[Password],[CommSelect],[SMSBasePhone],[CSDBasePhone],[GPRS_APN],[GPRS_Username],[GPRS_Password],[GPRS_ServerIPAddress],[GPRS_ServerPort],[GPRS_SyncInterval],[GPRS_DNS]
	Read	$WP+COMMTYPE+[Tag]=[Password],?
Response	$OK:COMMTYPE=[CommSelect],[SMSBasePhone],[CSDBasePhone],[GPRS_APN],[GPRS_Username],[GPRS_Password],[GPRS_ServerIPAddress],[GPRS_ServerPort],[GPRS_SyncInterval],[GPRS_DNS]	
Error Response	$ERR:COMMTYPE+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	CommSelect	Set primary communication type: 0: Serial port communication **Note**: Support COM numbers: COM 1~ COM 199 auto detectable. 1: GSM SMS communication 2: CSD: Circuit Switched Data communication (Reserved, currently not support) 3: GPRS UDP communication 4: GPRS TCP/IP communication
	SMSBase Phone	Base phone number for the GSM SMS base station. Maximum length is 16 digits (could be ignored if uses GPRS communication).

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	CSDBase Phone ***(Reserved)***	Base phone number for the GSM Circuit Switched Data communication. Maximum length is 16 digits (could be ignored if uses GPRS communication).
	GPRS_APN	Access Point Name for GPRS service (required for GPRS communication) The maximum length is 40 characters.
	GPRS_Username	User name for GPRS service if applicable. The maximum length is 20 characters.
	GPRS_Password	Password for GPRS service if applicable. The maximum length is 20 characters
	GPRS_ServerIPAddress	Default setting: 0.0.0.0 1. Static IP address: format xxx.xxx.xxx.xxx (Please do not use virtual IP address) 2. DNS name (GPRS_DNS must be defined) for the base station. The maximum length is 40 characters.
	GPRS_ServerPort	The port IP of the computer which the control center software is operating. The available range is from 1000~65535. Default setting: 1000
	GPRS_SyncInterval	Sync message is used to establish the GPRS connection and maintain the GPRS connectivity between the device and the base station. The range is between 10~65535 seconds. Default setting: 30 seconds **Note**: Set to '0' to disable sending Sync message. This parameter will not send any Sync message to the control center.
	GPRS_DNS	Domain Name Service IP address. Please contact local ISP for the DNS IP address. Please use the xxx.xxx.xxx.xxx as the format for this parameter. Default setting: 168.95.1.1
Example	Ex1: GPRS TCP with static WAN IP address Issue command: $WP+COMMTYPE=0000,4,,,internet,,,**60.210.45.68**,1050,30,168.95.1.1 Response: $OK:COMMTYPE=4,,,internet,,,60.210.45.68,1050,30,168.95.1.1	

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	Ex2: GPRS TCP with dynamic Domain Name Service Issue command: $WP+COMMTYPE=0000,4,,,internet,,,**serverDNSNAME**,6080,30,**168.95.1.1** Response: $OK:COMMTYPE=4,,,internet,,,serverDNSNAME,6080,30,168.95.1.1
Note	1) GPRS phone number i.e. "*99***1#" does not require for SPT100 device, SPT100 will detect it by itself. 2) If primary communication is GPRS then both parameters "SMSPhone" and "CSDPhone" are not required. 3) The port number of ServerPort parameter must be opened for the control center software and not conflict with others port which is occupied by OS or other software. 4) Please enable the GPRS service for the SIM card before start GPRS configuration. Also, please obtain related information such as "Access Point Name" (APN), user name (if applicable), and password (if applicable) for GPRS configuration ($WP+COMMTYPE command). 5) The static IP address is required for the GPRS communication. Sometimes the failure of GPRS connection is caused by the firewall setting enabled. 6) Synchronization message format (Data transmission by binary format) typedef struct { WORD SyncHeader; WORD SyncID; DWORD UnitID; } Syncstruct; SyncHeader is **always** 0XD7D0 SyncID is the sequence number for the Sync. message UnitID is the device identification number. The base station could use this information to recognize the current holding dynamic IP for each device. Ex:, received Synchronization message following: 0xD0 0xD7 0x1A 0x01 0xC7 0x54 0x44 0x3C SyncHeader = 0xD7 0xD0 SyncID = 0x01 0x1A (Decimal = 282) UnitID = 0x3C 0x44 0x54 0xC7 (Decimal = 1011111111)

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	7) The software developer must implement the function in the control center software in which must echo back exact synchronization string back to the device once the base station receives the synchronization message which was sent from the device to confirm the GPRS connection. 8) The performance of the GPRS connectivity might be affected by the synchronization interval due to the TELCO policy for the dynamic IP address control. The optimized synchronization interval needs to be tested in the local area in order to obtain the optimized synchronization interval (cost effective). 9) If the control center software is installed in a computer which is located in the "Intranet" then the parameter "GPRS_ServerIPaddress" should be the external one which connects to the router and the parameter "GPRS_ServerPort" should be the port number of the computer which is assigned by the router. If the parameter "GPRS_ServerIPaddress" is using "Virtual IP address" in the intranet then it will lead to the GPRS connection failure. 10) If the device is configured under GPRS mode (GPRS UDP/TCP), the device will send the acknowledgement for the receiving command or returning message back to the GMS SMS base phone number once the device receives the command from a GSM SMS phone number other than GSM SMS base phone number. If the GSM SMS base phone number is not set then the device will take the parameters but will not returning any message back to GSM SMS base phone number or GPRS server. 11) Please be aware that if the GSM base phone number is not set, the device has following behaviors: - If the device receives any valid incoming command via GSM SMS, the device will execute the command, but all acknowledgements or returning message will **NOT** be sent and will be ignored. - If the unit is configured under GPRS mode (GSM base phone number is set), if the device receives any valid incoming GSM command from a phone number other than GSM base phone number then the device will execute this command and return all acknowledgements and returning messages back to the GSM base phone number. 12) If this command is issued over GSM SMS, please be aware the text length limitation of the GSM message.

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$WP+ROAMING		
Description	Execute this command to enable/disable GPRS roaming function. This command does not affect GSM SMS roaming service. If GPRS roaming function is disabled, the device will automatically closed the GPRS session and all undelivered messages would be stored in the queue buffer. Those undelivered messages would be sent out whenever the device returns the non-GPRS roaming network.	
Format	Write	$WP+ROAMING+[Tag]=[Password],[Enable/Disable]
	Read	$WP+ROAMING+[Tag]=[Password],?
Response	$OK:ROAMING+[Tag]=[Enable/Disable]	
Error Response	$ERR:NMEA+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	[Enable/ Disable]	0: Disable GPRS roaming function 1: Enable GPRS roaming function
Example	Ex: Issue command: $WP+ROAMING=0000,1 Response: $OK:ROAMING=1	

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$WP+GETLOCATION		
Description	Execute this command to get current position of the vehicle	
Format	Write	$WP+GETLOCATION+[Tag]=[Password],
Response	Unit ID, DateTime, Longitude, Latitude, Speed, Heading, Altitude, Satellite, Report ID,	
Error Response	$ERR:GETLOCATION+[Tag]=[Error Code] *Please refer to appendix for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+GETLOCATION=0000 Response: 1010000001,20070313170020,121.123456,12.654321,45,233,0,9,0	
Note	1) The device returns the last valid GPS information upon request regardless the GPS reception. The parameter of “Number of Satellites” is ‘0’ if there is no GPS reception or GPS is not fixed. Thus the parameter of “number of satellite” could be a reference to check whether there is GPS reception or not.	

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$WP+TRACK		
Description	Execute this command to enable automatically reporting current position to the base station according to the parameter “mode” and related conditions.	
Format	Write	$WP+TRACK+[Tag]=[Password],[Mode],[Time],[Distance],[Number of Times],[Track basis],[CommSelect],[Heading]
	Read	$WP+TRACK+[Tag]=[Password],?
Response	$OK:TRACK+[Tag]= [Mode],[Time],[Distance],[Times],[Track basis],[CommSelect], [Heading]	
Error Response:	$ERR:TRACK+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Mode	0: Disable (Stop tracking)
		1. Time mode: The position information is sent to the base station according to the required time interval, only whole number can be used. Effective range for different communication types: Direct Connection: 1~65535 seconds. GSM SMS: 15~65535 seconds GSM CSD: 5~65535 seconds GPRS UDP/TCP/IP: 5~65535 seconds.
		2. Distance mode: The position information is sent to the base station according to the required distance interval, only whole number can be used. Effective range for different communication types: Direct Connection: 25~65535 meters: GSM SMS: 300 ~65535 meters GSM CSD: 100~65535 meters. GPRS UDP/TCP/IP: 100~65535 meters.

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		3. Time **AND** Distance: The position information is sent back to the base station when following **BOTH** conditions are satisfied: a. "Time Interval" is reached. b. "Distance Interval" is reached.
		4. Time **OR** Distance The position information is sent to the base station when one of the following condition is satisfied: a. "Time Interval" is reached. b. "Distance Interval" is reached.
		5. Heading mode: The position information is sent when the "Heading (direction)" parameter is changed beyond the assigned degrees. Please enter the required value in the "Heading" column.
		6. Heading **OR** Time The position information is sent back to the base station when one of the following condition is satisfied: a. "Heading (direction)" parameter is changed beyond the assigned degrees b. Required "Time Interval" is reached.
		7. Heading **OR** Distance The position information is sent whenever one of the following condition is satisfied: a. "Heading (direction)" parameter is changed beyond assigned degrees b. Required "Distance Interval" is reached.
		8. Heading **OR** (Time **AND** Distance) The position information is sent back to the base station when one of the following condition is satisfied: a. "Heading (direction)" parameter is changed beyond assigned degrees b. Required **BOTH** "Time **AND** Distance Interval" are satisfied.

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		9. Heading **OR** Time **OR** Distance The position information is sent whenever one of the following condition is satisfied: a. When the “Heading (direction)” parameter is changed beyond assigned degrees. b. Required “Time Interval” is reached. c. Required “Distance Interval” is reached.
	Time	Specify elapsed time interval to report current position. Default value is ‘0’. The effective range, please refer to the “mode” parameters option ‘1’ => “Time mode”. **Note:** The counter of “Times” will be displayed the how many times left while the command is executing when we query the command parameters.
	Distance	Specify elapsed distance interval to report current position. Default value is ‘0’. The effective range, please refer to the “mode” parameters option ‘2’ => “Distance mode”.
	Number of Times	Frequency (number of times the report needs to be sent). Effective range is from 0~65535. Set ‘0’ indicating “Continuously tracking.
	Track Basis	0: Position information is sent only GPS signal available. 1: Position information is sent regardless the GPS signal reception
	CommSelect	Set the output communication channel: 0: Serial port communication **Note**: Support COM numbers: COM 1~ COM 199 auto detectable. 1: GSM SMS communication 2: CSD: Circuit Switched Data communication (Reserved, currently not support) 3: GPRS UDP communication 4: GPRS TCP/IP communication
	Heading	The effective value is from 10~90 degrees.

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Example	Ex: Issue command: $WP+TRACK=0000,1,5,0,5,0 Response: $OK:TRACK=1,5,0,5,0 1010000001,20070313170020,121.123456,12.654321,0,233,0,9,2 1010000001,20070313170025,121.123456,12.654321,0,233,0,9,2 1010000001,20070313170030,121.123456,12.654321,0,233,0,9,2 1010000001,20070313170035,121.123456,12.654321,0,233,0,9,2 1010000001,20070313170040,121.123456,12.654321,0,233,0,9,2
Notes	1) The “Distance” and “Smart” mode requires the GPS reception. If the GPS reception is not stable then the accuracy will be decreased. 2) Record Basis is only available when mode is set to ‘1’

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$WP+REC		
Description	Execute this command to enable automatically logging current position into the memory of the device according to the parameter “Mode” and corresponding conditions.	
Format	Write	$WP+REC+[Tag]=[Password],[Mode],[Time],[Distance],[Number of Times],[Record Basis],[Heading]
	Read	$WP+REC+[Tag]=[Password],?
Response	$OK:REC+[Tag]= [Mode],[Time],[Distance],[Times],[Record basis],[Heading]	
Error Response:	$ERR:REC+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Mode	0: Disable (Stop storing position data into flash memory)
		1: Time mode: The position information is logged into the memory of the device according to the required time interval, only integer can be used. Effective parameters: Range: 1~65535 seconds.
		2:Distance mode: The position information is logged into the memory of the device according to the required distance interval, only integer can be used. Range: 25~65535 meters. **Note**: For vehicle application, suggest to set 50 meters or above for better performance.

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		3 :Smart mode: The position information is logged into the memory of the device according to the required “Time interval” **AND** “Distance interval”; the position information is not logged if one of the “Time interval” and “Distance interval” does not satisfy.
		4. Time **OR** Distance The position information is sent to the base station when one of the following condition is satisfied: a. “Time Interval” is reached. b. “Distance Interval” is reached.
		5. Heading mode: The position information is sent when the “Heading (direction)” parameter is changed beyond the assigned degrees. Please enter the required value in the “Heading” column.
		6. Heading **OR** Time The position information is sent back to the base station when one of the following condition is satisfied: a. “Heading (direction)” parameter is changed beyond the assigned degrees b. Required “Time Interval” is reached.
		7. Heading **OR** Distance The position information is sent whenever one of the following condition is satisfied: a. “Heading (direction)” parameter is changed beyond assigned degrees b. Required “Distance Interval” is reached.
		8. Heading **OR** (Time **AND** Distance) The position information is sent back to the base station when one of the following condition is satisfied: a. “Heading (direction)” parameter is changed beyond assigned degrees b. Required **BOTH** “Time **AND** Distance Interval” are satisfied.

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		9. Heading **OR** Time **OR** Distance The position information is sent whenever one of the following condition is reached: a. When the “Heading (direction)” parameter is changed beyond assigned degrees. b. Required “Time Interval” is reached. c. Required “Distance Interval” is reached.
	Time	Specify elapsed time interval to report current position. Default value is ‘0’. The effective range, please refer to the “mode” parameters option 1 “Time mode”.
	Distance	Specify elapsed distance interval to report current position. Default value is ‘0’. The effective range, please refer to the “mode” parameters option 2 “Distance mode”.
	Number of Times	Frequency (number of times the report needs to be sent). Effective range is from 0~65535. Set ‘0’ indicating “Continuously logging”.
	Record Basis	0: Position information is sent only GPS signal available. 1: Position information is sent regardless the GPS signal reception
Example	Ex: Issue command: $WP+REC=0000,1,5,0,0,0 Response: $OK:REC=1,5,0,0,0	
Notes	1) This function follows the FIFO (first in first out algorithm) algorithm. 1) The “Distance” and “Smart” mode requires the GPS reception. If the GPS reception is not stable then the accuracy will be decreased. 3) Record Basis is only available when mode is set to ‘1’	

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$WP+CLREC		
Description	Execute this command to erase all logging data from the memory of the device.	
Format	$WP+CLREC+[Tag]=[Password],	
Response	$OK:CLREC+[Tag[=OK	
Error Response	$ERR:CLRREC+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+CLREC=0000 Response: $OK:CLREC	

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<table>
<tr><th colspan="4">$WP+DLREC</th></tr>
<tr><td>Description</td><td colspan="3">Execute this command to download request logging data from the memory of the device</td></tr>
<tr><td rowspan="2">Format</td><td>Write command</td><td colspan="2">$WP+DLREC+[Tag]=[Password],[Start Date/Time],[End Date/Time]</td></tr>
<tr><td>Read command</td><td colspan="2">$WP+DLREC+[Tag]=0000,?</td></tr>
<tr><td rowspan="2">Response</td><td colspan="3">For Write command:

Command acknowledgement:
$OK:DLREC+[Tag]=[Start Date/Time],[End Date/Time]

Download task completes:
$Download Completed</td></tr>
<tr><td colspan="3">For Read command:

$OK:DLREC=number of logs (start date~enddate)

Ex:
$OK:DLREC=388(20070522074235~20070522074907)</td></tr>
<tr><td>Error Response</td><td colspan="3">$ERR:DLREC+[Tag]=[Error Code]
Please refer to appendix 9.2 for detailed error code descriptions.</td></tr>
<tr><td rowspan="4">Parameters</td><td>Tag</td><td colspan="2">The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)</td></tr>
<tr><td>Password</td><td colspan="2">Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”</td></tr>
<tr><td>Start Date</td><td colspan="2">The year, month, day, hour, minute and second of the starting date in local time or GMT.
Format of this parameter: YYYYMMDDHHMMSS or ‘0’ (please refer to the “Note” section for detail)</td></tr>
<tr><td>End Date</td><td colspan="2">The year, month, day, hour, minute and second of the ending date in local time or GMT.
Format of this parameter: YYYYMMDDHHMMSS or ‘0’ (please refer to the “Note” section for detail)</td></tr>
</table>

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Example

Ex:

Issue command:

$WP+DLREC=0000,0,0

Response:

$OK:DLREC=0,0

1010000001,20070313180520,121.123456,12.654321,45,233,0,8,1

1010000001,20070313181020,121.123456,12.654321,45,233,0,7,1

1010000001,20070313181520,121.123456,12.654321,45,233,0,8,1

1010000001,20070313182020,121.123456,12.654321,45,233,0,8,1

1010000001,20070313182520,121.123456,12.654321,45,233,0,8,1

1010000001,20070313183020,121.123456,12.654321,45,233,0,8,1

1010000001,20070313183520,121.123456,12.654321,45,233,0,8,1

$Download Completed

Note:

1) If the download process is interrupted by any insertion command/message then the error message "$ERR:7" is sent back to the base station.

2) This command does not support resume function.

3) The value '0' can be used for both parameters "Start Date Time" and "End Date Time". The corresponding actions are following:

Start Date Time	End Date Time	Action
0	0	Get all logs from the memory
Valid Date & Time format	0	Download all logs from the specific "Start Date Time" to the last log in the memory.
0	Valid Date & Time format	Download all logs from the 1st log to the date specify in the "End Date Time in the memory.
Valid Date & Time format	Valid Date & Time format	Get all logs between the "Start Date Time" and "End Date Time".

4) This command supports "Resume" function in the GPRS TCP/IP mode. The downloading task could be resumed once the GPRS connection is re-established.

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$WP+SPDLREC		
Description	Execute this command to stop downloading process	
Format	$WP+SPDLREC+[Tag]=[Password],	
Response	$OK:SPDLREC+[Tag[=OK	
Error Response	$ERR:SPDLREC+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+SPDLREC=0000 Response: $OK:SPDLREC	
Note	1) Once the downloading process gets interrupted, the $ERR:7 message will be sent out to the base station.	

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$WP+REBOOT		
Description	Execute this command to reboot the device. All setting will be remained effective.	
Format	$WP+REBOOT+[Tag]=[Password]	
Response	$OK:REBOOT+[Tag]	
Error Response	$ERR:REBOOT+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+REBOOT=0000 Response: $OK:REBOOT	
Note	1) Please re-establish the direct connection after issuing the $WP+REBOOT command. The physically unplug and re-plug in the USB cable might be necessary.	

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$WP+RESET		
Description	Execute this command to reset the device to factory default settings or pre-set settings	
Format	Write	$WP+RESET+[Tag]=[Password]
Response	$OK:RESET+[Tag]	
Error Response	$ERR:RESET+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+RESET=0000 Response: $OK:RESET	
Note	1) The “Unit ID” parameter will remain the same after executing this command. Other settings will be set back to factory default. 2) If the password is forgotten then the device can accept the last 6 digits of IMEI No. as password in order to reset the device successfully.	

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$WP+PSM		
Description	Execute this command to enable the “Power Saving Function” of the device.	
Format	$WP+PSM+[Tag]=[Password],[Mode],[Power Down Delay],[Sleeping Priority]	
Response	$OK:PSM+[Tag]= [Mode],[Power Down Delay],[Sleeping Priority]	
Error Response	$ERR:PSM+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	[Mode]	0: Disable 1: GPS off; GSM on; GPRS on, LCD on 2. GPS off; GSM on; GPRS off, LCD off
	[Power Down Delay]	60~65535 seconds
	[Sleeping Priority]	0: Device will not go to sleeping mode while the $WP+TRACK and $WP+SPD command are executing. 1: Device goes to sleeping mode regardless the execution of $WP+TRACK and $WP+SPD command
Example	Ex: Issue command: $WP+PSM=0000,1,120,1 Response: $OK:PSM=1,120,1	

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Note:	**1) Conditions for entering sleep mode (AND algorithm):** 1. No movement within "Power Down Delay" duration. (mode 1 and mode 2) 2. Not receive any command within "Power Down Delay" seconds (mode 1 and mode 2) 3. No button is pressed within "Power Down Delay" seconds (mode 1 and mode 2) 4. No undelivered messages exist (mode 1 and mode 2) 5. No $WP+TRACK or $WP+SPD command is used (mode 1 and mode 2) 2) **Condition for device waking up (OR algorithm):** 1. Movement detected (Mode 1 and Mode 2) 2. Any button is pressed (mode 1 and Mode 2) 3. Receive GSM or GPRS command (mode 1) 4. Receive GSM command (mode 2) 3) If device wakes up and completes the required task, it goes to sleeping mode according to the **"**Power Down Delay**"** interval if all conditions of "entering sleeping mode" remaining true. 4) If there is no "wake up condition" detected, the device wakes up every 60 minutes and stay on for 1 minute to update the GPS information. 5) If $WP+TRACK or $WP+SPD command are executing, device will not going to sleeping mode until the command is disabled. 6) When set to mode 2, the logging function will not be executed during the sleeping duration except the device waking up or power saving mode is disabled.

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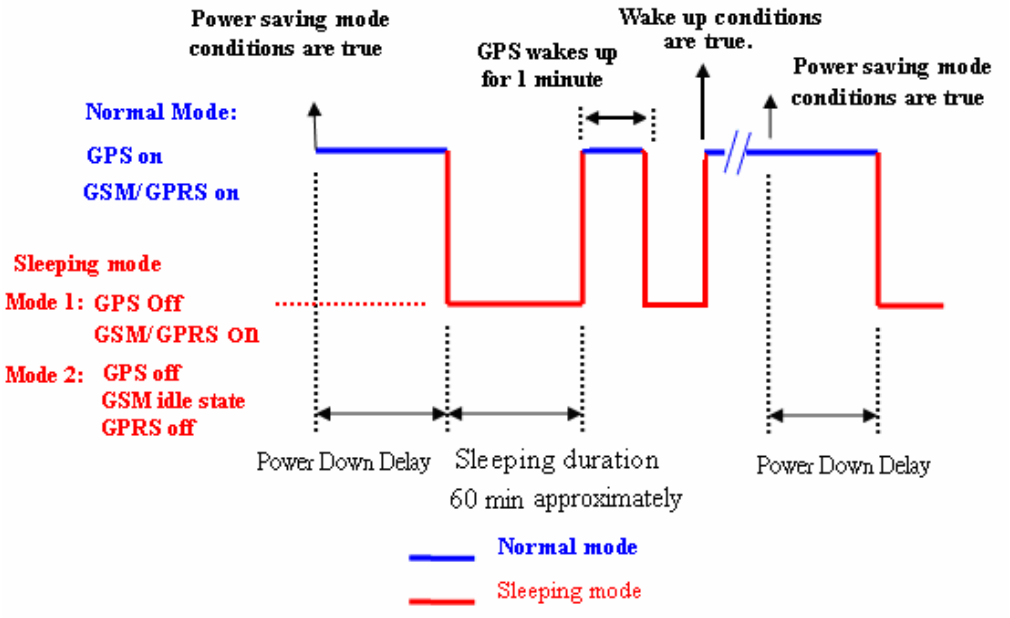
7) Please refer to the power saving mode diagram as following:



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$WP+SETEVT		
Description	Execute this command to set GEO-Fencing event	
Format	Write	$WP+SETEVT+[Tag]=[Password],[ReportID],[Enable/Disable],[Longitude],[Latitude],[Tolerance],[Zone Control],[Report Action]
	Read	$WP+SETEVT+[Tag]=[Password],[Report ID],?
Response	$OK:SETEVT+[Tag]=[ReportID],[Enable/Disable],[Longitude],[Latitude],[Tolerance],[Zone Control],[Report Action]	
Error Response:	$ERR:SETEVT+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Report ID	The identifier of individual report. The report ID only can be assigned by the integers. The device supports up to 50 event settings and the effective Id number is from 50~99.
	Enable/ Disable	0: Disable 1: Enable
	Longitude	The longitude of the circle zone center point.
	Latitude	The latitude of the circle zone center point.
	Tolerance	The radius of the circle zone. The effective range is from 50 to 65535 meters.
	Zone Control	1: Inside Zone The event will be sent when the GPS coordinate is inside the defined zones. 2. Outside Zone The event will be sent when the GPS coordinate is outside the defined zones.

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	Report Actions	This parameter is to define the actions when the conditions become true. The following actions are available: 1. Logging: When the defined report's conditions are true then the device will store the current GPS position information for the specify event into the memory. 2. Polling: When the defined report's conditions are true then the device will send the current GPS position information for the specify event back to the base station. 3. Logging and Polling: When the defined report's conditions are true then the device will store the current GPS position information for specific event into memory and send the event back to the base station as well.
Example	Ex 1: Issue command: $WP+SETEVT=0000,50,1,120.167453,28.649871,200,1,3 Response: $OK:SETEVT=50,1,120.167453,28.649871,200,1,3 Ex 2: Issue command: $WP+SETEVT=0000,25,? Response: $OK:SETEVT=25, 1,20.145634,25.764956,500,2,1	

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$WP+CLEVT		
Description	Execute this command to clear single/all report settings	
Format	Write	$WP+CLEVT+[Tag]=[Password],[Report ID]
Response	$OK:CLEVT+[Tag]= [Report ID]	
Error Response	$ERR:CLEVT+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Report ID	Specify the report identifier which will be cleared. The effective identifier range is from 50~99. 255: clear all report ID.
Example	Ex1: Issue command: $WP+CLEVT=0000,50 Response: $OK:CLEVT=50 Ex2: Issue command: $WP+CLEVT=0000,255 Response: $OK:CLEVT=255	

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$WP+IMEI		
Description	Execute this command to query the IMEI No. for the internal GSM module	
Format	$WP+IMEI+[Tag]=[Password]	
Response	$OK:IMEI+[Tag]=IMEI No.	
Error Response	$ERR:IMEI+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+IMEI=0000 Response: $OK:IMEI=357258004284081	

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$WP+SIMID		
Description	Execute this command to query the identification number of the SIM card	
Format	$WP+SIMID+[Tag]=[Password]	
Response	$OK:SIMID+[Tag]=SIM card Identification No.	
Error Response	$ERR:SIMID+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+SIMID=0000 Response: $OK:SIMID=87109834789209748618	

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$WP+VWT		
Description	Execute this command to enable voice wiretapping function. Once the device receives this command then it will call out to the assigned phone number automatically. The device will enable microphone and disable speaker function once the phone line is connected. Thus, the user's conversation will be monitored by the assigned phone number. This function will be disabled automatically once the phone line has been hung up.	
Format	$WP+VWT+[Tag]=[Password],[Phone number]	
Response	$OK:VWT+[Tag]=[Phone number]	
Error Response	$ERR:VWT+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is "0000"
	Phone number	The specific phone number which the device will call out. This phone number supports the international phone calls.
Example	Ex: Issue command: $WP+VWT=0000,+886932400821 Response: $OK:VWT=+886932400821	
Note	1) If the device fails to establish the phone line (i.e. gets the "busy tone") for 5 times, the device will stop executing this function automatically.	

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<table>
<tr><th colspan="4">$WP+TEST</th></tr>
<tr><td>Description</td><td colspan="3">Execute this command to test major modules status and the voltage level of the device</td></tr>
<tr><td>Command Format</td><td>Write</td><td colspan="2">$WP+TEST+[Tag]=[Password]</td></tr>
<tr><td rowspan="3">Response</td><td colspan="3">$OK:TEST+[Tag]=[Status], [Voltage Level]</td></tr>
<tr><td rowspan="2">Parameters</td><td>Status</td><td>0: No Error occurs.
1: GSM Error.
2. GPS Error</td></tr>
<tr><td>Voltage Level</td><td>The voltage level of the internal backup battery.</td></tr>
<tr><td>Error Response</td><td colspan="3">$ERR:TEST+[Tag]=[Error Code]
Please refer to appendix 9.2 for detailed error code descriptions.</td></tr>
<tr><td rowspan="2">Parameters</td><td>Tag</td><td colspan="2">The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)</td></tr>
<tr><td>Password</td><td colspan="2">Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”</td></tr>
<tr><td>Example</td><td colspan="3">Ex:
Issue command:
$WP+TEST+12345=0000
Response:
$OK:TEST+12345=3,3.9</td></tr>
<tr><td>Note</td><td colspan="3">1) If the device connect to a computer by USB cable then the voltage level always shows 4.2V (approximately estimation)
2) In order to get actual voltage level of the interval backup battery, this command must be issued via remotely communication such as GSM/GPRS without the device connecting to a computer.</td></tr>
</table>

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$WP+VER		
Description	Execute this command to query the current firmware and hardware version of the device.	
Format	$WP+VER+[Tag]=[Password]	
Response	$OK:VER+[Tag]=firmware version, hardware version	
Error Response	$ERR:VER+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
Example	Ex: Issue command: $WP+VER=0000 Response: $OK:VER=1.001,3	

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$WP+NMEA		
Description	Execute this command to enable the outputting the NMEA string through serial port. The NMEA format is “NMEA-0183” –$GPGGA, $GPGSA, $GPGSV, $GPRMC, and $GPVTG.	
Format	$WP+NMEA+[Tag]=[Password],[Enable/Disable]	
Response	$OK:NMEA+[Tag]	
Error Response	$ERR:NMEA+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	[Enable/ Disable]	0: Disable 1: Enable
Example	Ex: Issue command: $WP+NMEA=0000,1 Response: $OK:NMEA $GPGGA,094307.000,2503.6251,N,12138.9153,E,1,10,1.0,169.9,M,15.3,M,,0000*56 $GPGSA,A,3,18,05,22,12,30,09,21,14,31,24,,,1.9,1.0,1.6*3B $GPRMC,094307.000,A,2503.6251,N,12138.9153,E,0.00,,110407,,,A*79 $GPGGA,094308.000,2503.6251,N,12138.9153,E,1,10,1.0,169.9,M,15.3,M,,0000*59 $GPGSA,A,3,18,05,22,12,30,09,21,14,31,24,,,1.9,1.0,1.6*3B $GPRMC,094308.000,A,2503.6251,N,12138.9153,E,0.00,,110407,,,A*76 $GPGGA,094309.000,2503.6251,N,12138.9153,E,1,10,1.0,169.9,M,15.3,M,,0000*58 $GPGSA,A,3,18,05,22,12,30,09,21,14,31,24,,,1.9,1.0,1.6*3B $GPRMC,094309.000,A,2503.6251,N,12138.9153,E,0.00,,110407,,,A*77 $WP+NMEA=0000,0 $OK:NMEA	

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Note	1) While NMEA string is outputted via USB port of the device, the error message will not come out via USB port. Please disable output the NMEA string before doing any diagnostic for the device.

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$WP+SPD		
Description	Execute this command to enable the speeding event report. If the vehicle speed is in the speeding range (between minimum and maximum speed) for the certain time period (Duration) then it will trigger the speeding report.	
Format	Write	$WP+SPD=[Password],[Mode],[Min Speed],[Max Speed],[Duration]
	Read	$WP+SPD+[Tag]=[Password],?
Response	$OK:SPD+[Tag]=[Mode],[Min Speed],[Max Speed],[Duration]	
Error Response	$ERR:SPD+[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Mode	0: Disable 1: Logging: 2: Polling: 3: Logging and Polling
	Min Speed	Set Minimum Speed. Valid range: 0~255 km/hr.
	Max Speed	Set Maximum Speed. Valid range: 0~255 km/hr
	Duration	The parameter defined the time duration to activate the speeding report. For logging: 15~65535 seconds For polling: 15~65535 seconds For logging and polling: 15~65535 seconds.

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Example	Ex: Issue command: $WP+SPD=0000,3,100,200,15 Response: $OK:SPD=3,100,200,15

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$WP+EMOV		
Description	Execute this command to set up the contact number for detecting unauthorized movement (Activation/deactivation by depressing the “Function Key 1” for 3 seconds). This command takes effect after 3 minutes of function activation. If this function has not been disabled after 1 minute of event triggering, selective actions will be executed. The receiving message format for the control center and contact phone numbers please refer to the “Note” section.	
Format	Write	$WP+EMOV+[Tag]=[Password],[SMS1],[SMS2],[SMS3],[SMS4],[SMS5],[EMOV Mask]
	Read	$WP+EMOV+[Tag]=[Password],?
Response	$OK:EMOV+[Tag]=[SMS1],[SMS2],[SMS3],[SMS4],[SMS5],[EMOV Mask]	
Error Response	$ERR:EMOV+[Tag]=[Error Code] *Please refer to appendix for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	SMS 1	Set the contact phone number 1
	SMS 2	Set the contact phone number 2
	SMS 3	Set the contact phone number 3
	SMS 4	Set the contact phone number 4
	SMS 5	Set the contact phone number 5
	EMOV Mask	This setting is based on the bitwise operation. This parameter can specify which quick dial buttons are available. The bitwise definitions are following: 0: Disable 1: SMS 1

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		2: SMS 2 4: SMS 3 8: SMS 4 16: SMS 5 32. Send a message to Control Center (base on the primary communication type). 64: Store this event into the device memory. Ex: Set to '36' means control center will receive the string with report ID '5' and the phone number of SMS 3 will receive a SMS alert when the unauthorized movement alert is triggered.
Example	Ex1: Issue command: $WP+EMOV=0000,+886123456789,0933733456,+886987654321,+886932400821,+886910777777,38 Response: $OK:EMOV=+886123456789,0933733456,+886987654321,+886932400821,+886910777777,38 Ex2: Issue command: $WP+EMOV=0000, +886123456789,0933733456,,,,,1 Response: $OK:EMOV=+886123456789,0933733456,,,,,1	
Note	1) If control center option is selected in the "EMOV Mask" parameter then the control center server will receive the following string with report ID '**5**'. 1010000001,20070313170020,121.123456,12.654321,45,233,0,9,**5** 2) The format for the SMS message to contact phone number is following: Moving Alert Unit ID: 1XXXXXXXXX Date/Time: (YYYYMMDDHHMMSS) Lon:XXX.XXXXXX Lat: XXX.XXXXXX Speed: XXX Km/h Satellites: XX	

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	3) The “Moving Alert” report only sends once, this function will be disabled automatically. If we need to enable the “Parking” function, then we need to re-enable the function by pressing and holding the “Function Key 1” for 3 seconds.

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$WP+EMSMS		
Description	Execute this command to set the emergency contact phone number up to 5 different numbers. Once the emergency button is pressed then the emergency GSM message will be sent to the pre-defined contact phone number. The receiving message format for the contact phone numbers please refer to the “Note” section.	
Format	Write	$WP+EMSMS+[Tag]=[Password],[SMS1],[SMS2],[SMS3],[SMS4],[SMS5],[EMSMS Mask]
	Read	$WP+EMSMS+[Tag]=[Password],?
Response	$OK:EMSMS+[Tag]=[SMS1],[SMS2],[SMS3],[SMS4],[SMS5],[EMSMS Mask]	
Error Response	$ERR:EMSMS+[Tag]=[Error Code] *Please refer to appendix for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	SMS 1	Set the emergency contact phone number 1
	SMS 2	Set the emergency contact phone number 2
	SMS 3	Set the emergency contact phone number 3
	SMS 4	Set the emergency contact phone number 4
	SMS 5	Set the emergency contact phone number 5
	EMSMS Mask	This setting is based on the bitwise operation. This parameter can specify which quick dial buttons are available. The bitwise definitions are following: 0: Disable 1: SMS 1 2: SMS 2

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		4: SMS 3 8: SMS 4 16: SMS 5 32: Send a message to Control Center (base on the primary communication type) 64: Store this event into the device memory. Ex: Set to '36' means control center will receive the string with report ID '4' and the phone number of SMS 3 will receive the SMS emergency messages when the emergency button (button 5) is pressed.
Example	Ex1: Issue command: $WP+EMSMS=0000,+886123456789,0933733456,+886987654321,+886932400821 , +886910777777, 24 Response: $OK:EMSMS=+886123456789,0933733456,+886987654321,+886932400821, ,+886910777777,24 Ex2: Issue command: $WP+EMSMS=0000, +886123456789,0933733456,,,,,2 Response: $OK:EMSMS=+886123456789,0933733456,,,,,2	
Note	1) If control center option is selected in the "EMSMS Mask" parameter then the control center server will receive the following string with report ID '**4**'. 1010000001,20070313170020,121.123456,12.654321,45,233,0,9,**4** 2) The format for the SMS message to contact phone number is following: Emergency Report Unit ID: 1XXXXXXXXX Date/Time: (YYYYMMDDHHMMSS) Lon:XXX.XXXXXX Lat: XXX.XXXXXX Speed: XXX Km/h Satellites: XX	

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$WP+QDSET		
Description	Execute this command to set the “Quick Dial” phone numbers for quick dial function.	
Format	Write	$WP+QDSET+[Tag]=[Password],[QD1],[QD2],[QD3],[QDMask]
	Read	$WP+QDSET+[Tag]=[Password],?
Response	$OK:QDSET+[Tag]=[QD1],[QD2],[QD3],[QDMask]	
Error Response	$ERR:QDSET+[Tag]=[Error Code] *Please refer to appendix for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	QD1	Set the quick dial number for the quick dial function button 2.
	QD2	Set the quick dial number for quick dial function button 3
	QD3	Set the quick dial number for quick dial function button 4
	QDMask	This setting is based on the bitwise operation. This parameter can specify which quick dial button is available. The bit definitions are following: 0: Disable 1: QD1 2: QD2 4: QD3 Ex: Set to ‘6’ means QD2 (button 3) and QD3 (button 4) are available. Pressing the button 1 (QD1) will not take any action.
Example	Ex: Issue command: $WP+QDSET=0000, +886932400821,+886937400841,0933765432,3 Response: $OK:QDSET=+886932400821,+886937400841,0933765432,3	

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$WP+SETTZ		
Description	Execute this command to setup the local time. The time of returning message will be based on the time zone setting. The default time zone is the GMT time.	
Format	$WP+SETTZ+[Tag]=[Password],[Sign],[Hour],[Minute]	
Response	$OK:SETTZ+[Tag]=[Sign],[Hour],[Minute]	
Error Response	$ERR:SETTZ +[Tag]=[Error Code] *Please refer to appendix 9.2 for detailed error code descriptions.*	
Parameters	Tag	The tag could consist of number or character string which can be defined by user. The returning message will include the same tag and it is helpful to recognize the acknowledgements with corresponding issued commands. This tag could be left as empty if it is not used. (Max. 5 characters)
	Password	Password of the device. Only correct password can access the device and change the configuration. The minimum length of character is 4 digits; maximum length of character is 10 digits. It supports numerical characters only. Default password is “0000”
	Sign	+: ahead GMT time -: behind GMT time
	Hour	Offset hours. Effective range is from 00~13
	Minute	Offset minute (based on 15 minutes basis). Please select one of following: 00,15,30,45
Example	Ex: Issue command: $WP+SETTZ=0000,+,08,00 Response: $OK:SETTZ=+,08,00	

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9. Appendices:

9.1 Report ID Description:

Report ID	Description	Corresponding command	Remark
0	Position data	$WP+GETLOCATION	
1	Logging position data	$WP+REC	
2	Track position data	$WP+TRACK	
3	Over speeding report	$WP+SPD	
4	Emergency contact number	$WP+EMSMS	
5	Unauthorized movement report	$WP+EMOV	
50~99	User defined report position	$WP+SETEVT	

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9.2 Returning Command Error List:

The error list will be indicating to "$ERR: Code number"

Error Code	Description
0	Unknown communication error
1	Invalid password
2	Invalid command parameters
3	GSM SMS base phone number or GPRS Server IP address not set
4	Unable to detect GSM signal
5	GSM Failed
6	Unable to establish the GPRS connection
7	Download process interrupted
8	Voice busy tone

Notes:

1. All error codes can be appeared via serial port communication.
2. Error code 1, 2, or 3 could be sent back over the air communication or serial port communication.
3. All error code will not be sent back to control center over GSM SMS communication even though the GSM SMS message is the primary communication type..

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9.3 CMS Error List:

Error Code	Description
1	Unassigned (unallocated) number
8	Operator determined barring
10	Call barred
21	Short message transfer rejected
27	Destination out of service
28	Unidentified subscriber
29	Facility rejected
30	Unknown subscriber
38	Network out of order
41	Temporary failure
42	Congestion
47	Resources unavailable, unspecified
50	Requested facility not subscribed
69	Requested facility not implemented
81	Invalid short message transfer reference value
95	Invalid message, unspecified
96	Invalid mandatory information
97	Message type non-existent or not implemented
98	Message not compatible with short message protocol state
99	Information element non-existent or not implemented
111	Protocol error, unspecified
127	Interworking, unspecified
128	Telematic interworking not supported
129	Short message Type 0 not supported
130	Cannot replace short message
143	Unspecified TP-PID error
144	Data coding scheme (alphabet) not supported
145	Message class not supported
159	Unspecified TP-DCS error
160	Command cannot be actioned
161	Command unsupported
175	Unspecified TP-Command error

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Error code	Description
176	TP DU not supported
192	SC busy
193	No SC subscription
194	SC system failure
195	Invalid SME address
196	Destination SME barred
197	SM Rejected-Duplicate SM
198	TP-VPF not supported
199	TP-VP not supported
208	D0 SIM SMS storage full
209	No SMS storage capability in SIM
210	Error in MS
211	Memory Capacity Exceeded
212	SIM Application Toolkit Busy
213	SIM data download error
255	Unspecified error cause
300	ME failure
301	SMS service of ME reserved
302	Operation not allowed
303	Operation not supported
304	Invalid PDU mode parameter
305	Invalid text mode parameter
310	SIM not inserted
311	SIM PIN required
312	PH-SIM PIN necessary
313	SIM failure
314	SIM busy
315	SIM wrong
316	SIM PUK required
317	SIM PIN2 required
318	SIM PUK2 required
320	Memory failure
321	Invalid memory index
322	Memory full

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Error code	Description
330	SMSC address unknown
331	No network service
332	Network timeout
500	Unknown error
512	SIM not ready
513	Unread records on SIM
514	CB error unknown
515	PS busy
516	Invalid length
517	SM BL not ready
528	Invalid (non-hex) char in PDU

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9.4 CME Error List:

Error Code	Description
3	Operation not allowed
4	Operation not supported
5	PH-SIM PIN required
6	PH-FSIM PIN required
7	PH-FSIM PUK required
10	SIM not inserted
11	SIM PIN required
12	SIM PUK required
13	SIM failure
14	SIM busy
15	SIM wrong
16	Incorrect password
17	SIM PIN2 required
18	SIM PUK2 required
20	Memory full
21	Invalid index
25	Invalid characters in text string
26	Dial string too long
27	Invalid characters in dial string
30	No network service
31	Network timeout
32	Network not allowed - emergency calls only
40	Network personalization PIN required
41	Network personalization PUK required
42	Network subset personalization PIN required
43	Network subset personalization PUK required
44	Service provider personalization PIN required
45	Service provider personalization PUK required
46	Corporate personalization PIN required
47	Corporate personalization PUK required
100	Unknown

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Error Code	Description
103	Illegal MS
106	Illegal ME
107	GPRS services not allowed
111	PLMN not allowed
112	Location area not allowed
113	Roaming not allowed in this location area
132	Service option not supported
133	Requested service option not subscribed
134	Service option temporarily out of order
148	Unspecified GPRS error
149	PDP authentication failure
150	Invalid mobile class

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10. About Wonde Proud Technology:

WondeX SPT100 series device is manufactured by Wonde Proud Technology. Wonde Proud Technology provides advance solution for GPS related solutions including the various GPS components, Automatic Vehicle Location (AVL) device (data logger & real time tracking devices). Please contact us at the phone and fax number list below or visit our website for further product information.

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1. Low Battery Report:

$WP+LOWBATT=[PWD],[Mask]

[PWD]: PWD of the device

[Mask]: 0: Disable (Default)
1: Enable Buzzer (When low alarm will sound a "beep" every 1 minute and 2 beeps before shut down (caused battery no power)
2: Logging
3: Buzzer + Logging
4 :Polling
5: Polling + Buzzer
6: Polling + Logging
7: Polling + Logging +Buzzer

Note:
Report ID 40: Main power low report

2. Power on/off report

$WP+PRSET=[PWD],[Power on report],[power off report]

[PWD]: PWD of the device

[Power on report]:
0: disable
1: logging
2: polling

[Power low report]:
0: disable
1: logging
2. polling

Note:
Report ID 41: Device power off report
Report Id 42: Device power on report

3. Power Saving Mode:

$WP+PSM=[PWD],[Mode],[Power Down Delay],[Sleeping Priority],[enable/disable cyclic wake up]

[Mode]: Added mode 3 (mode 2 + disable G-Sensor detection)

[Enable/disable Cyclic wake up]:
0: Disable (no GSM/GPRS cyclic wake up, no report, only GPS cyclic wake up)
1: wake up only (no sleeping report)
2: Sleeping report only (no GSM/GPRS cyclic wake up, only GPS cyclic wake up)
3: Cyclic wake up and send sleeping report

Note:
Report ID 37: Sleeping report

4. Switch for external power source to power on the device

$WP+EXPWR=[PWD],[Enable/Disable external power on the device],[Enable/Disable backlight function]

[PWD]: PWD of the device

[Enable/Disable external power on the device]:

0: Connect the power source to the USB would NOT power on the device.

1: Connect the power source to the USB could wake up the device.

2: While disconnecting the power source from the USB port, the device will power off the device; connecting power source to the USB could wake up the device

[Enable/Disable backlight function]:

0: Default backlight function.

1: Backlight always on.

5. Choice between voice call and/or SMS and/or GPRS report if SOS button pressed:

$WP+EMSMS=[PWD],[SMS1],[SMS2],[SMS3],[SMS4],[SMS5],[EMSMS Mask],[Text message],[Enable/disable beep when press button to start the emergency process]

[PWD]: PWD of the device

[SMS1],[SMS 2],[SMS3],[SMS 4],[SMS 5]: pre-defined phone numbers to receive GSM SMS report

[EMSMS Mask]:

0: Disable

1: SMS 1

2: SMS 2

4: SMS 3

8: SMS 4

16: SMS 5

32: Send a message to Control Center (base on the primary communication type)

64: Store this event into the device memory.

128: Make a phone call to the SMS 1

[Text message]: maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

[Enable/disable beep when press button to start the emergency process]:

0: Disable

1: Enable

6. Incoming and outgoing calls limitation. Enabled/disabled (if disabled, no display of dialing mode menu)

$WP+CIFR=[PWD],[mode],[incoming call 1],[incoming call 2], [incoming call 3],[outgoing call 1],[outgoing call 2],[outgoing 3 call]

[PWD]: PWD of the unit
[Mode]:
0: Accept all incoming and outgoing calls
1: Enable incoming call filter
2: Enable outgoing call filter
3: Enable incoming and outgoing call filter
4: Reject all incoming and outgoing calls.
[Incoming call 1]: Set the incoming filter phone number 1
[Incoming call 2]: Set the incoming filter phone number 2
[Incoming call 3]: Set the incoming filter phone number 3
[Outgoing call 1]: Set the outgoing filter phone number 1
[Outgoing call 2]: Set the outgoing filter phone number 2
[Outgoing call 3]: Set the outgoing filter phone number 3

7. Choice between GPRS report and/or voice call on C1/C2/C3 button

$WP+QDSET=[PWD],[QD1],[QD2],[QD3], [QDMask for Voice call],[QDMask for GPRS report],[Enable/Disable pickup/hang up/beep for QD function]
[PWD]: PWD of the device
[QD1],[QD2],[QD3]: Quick dial set (up to 3 sets)
[QDMask for Voice Call]:
1: QD1
2: QD2
4: QD4
[QDMask for GPRS Report]:
1: QD1 **(Report ID 43)**
2: QD2 **(Report ID 44)**
4: QD4 **(Report ID 45)**
[Enable/Disable pickup/hang up voice call]
0: Disable
1: 'P' to Pick up
2: Only 'C1' hang up
4: Sound a "beep" when C1,C2,or C3 button is pressed.

8. Add a new function to adjust the voice volume (by default 50%)

$WP+VOL=[PWD],[Set Volume],[Enable/Disable the adjustment of voice volume by button]

[PWD]: PWD of the device

[Set Volume]: value between 0~100

0: no voice

100: loudest voice

[Enable/Disable the adjustment of voice volume by button]

0: Disable the volume adjustment by button

1: Enable the volume adjustment by button

Note:

The currently volume (if the volume has been adjusted by the user), it will be showing in the second parameters when query the parameters of this command

Ex:

$WP+VOL=0000,?

$OK:VOL=80,70,1

80: (current volume level by command)

70: (currently volume level by user adjustment)

9. G-sensor status inside sync message

Indicates in the last bit of Sync ID, this function only available when the Power Saving Mode is on.

10. Add ULOCK function (lock the USB communication)

$WP+ULOCK=[PWD],[Enable/Disable]

[PWD]: PWD of the device

[Enable/Disable]:

0: Disable (Default)

1. Enable

11. Add a new parameter for the VWT command. Enable/Disable Speaker

$WP+VWT=[PWD],[Phone number],[Enable/Disable]

[PWD]: PWD of the device

[Phone number]: the destination number which the device will dial.

[Enable/Disable]

0: Disable speaker

1: Enable speaker

12. Remove the "time" from the first page and use a "satellite" icon instead

Icon blink: GPS is not fixed.

Icon not blinking: GPS is fixed.

13. Displaying ** for Pin code for security reason.**

Function is like normal, but the pin code will not show up regardless the PIN code is enable or disable.

14. Text transmission: the message will be displayed in the normal mode to replace the GPS coordinate.

$WP+TMSG=[PWD],[Enable/Disable],[Display Options],[Msg line 1],[Msg line 2],[Msg line 3], [Enable/disable beep on message arrival],[Enable/Disable the report for user deleting message]

[PWD]: PWD of the device

[Enable/Disable]:

0: Disable: the message on the LCD will be erased.

1: Enable.

2: USB: the output format is following:

$TMSG=**[Msg line 1],[Msg line 2],[Msg line 3][CR][LF]**

[Display Options]:

0: Display the message permanently (if $WP+TMSG is disabled, then the message on the LCD screen would be erased).

5~65534 seconds: Duration of displaying message on the screen.

[Msg line 1]: ASCII format, maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

[Msg line 2]: ASCII format, maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

[Msg line 3]: ASCII format, maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

[Enable/disable beep on message arrival]:

0: Disable beep when the message arrival.

1: Enable beep when the message arrival.

[Enable/disable the report for user deleting message]:

0: Disable report.

1: Enable report.

Note:

1. The device always returns the following:

"**OK:TMSG=[Enable/Disable], [Display Options], [Msg line 1],[Msg line 2],[Msg line 3]", [Enable/disable beep on message arrival]**

2. Also, it can be queried the parameters.

3. If $WP+LCEMSG is enabled, then TMSG has the priority to display on the LCD. The message of $WP+LCDMSG will be displayed when the TMSG is disabled or time interval is reached.

4. Delete message:

Short press the "C1" button then long press "C1" button again to delete the message.

5. When the user delete the message, then the "[Enable/Disable] parameter automatically becoming "Disable" and the text will be remained in the command parameter when query the parameter of this command.

6. The "**Enable/disable beep on message arrival"** will be changed to '0' after the message arrival when you query the parameter.

15. Add the function to show a owner message or unit ID to replace the GPS coordinates on the first menu.

$WP+LCDMSG=[PWD],[Enable/Disable],["Text Message"]

[PWD]: PWD of the device

[Enable/Disable]:

0: Disable (display GPS coordinates)

1: Enable (Display unit ID to replace the latitude information, and Owner message replaces the longitude information)

[Text Message]: maximum length is 16 bytes (if it is null then only unit ID will be displayed if this command is enabled).

16. Displaying mode manipulate (Rev28 and more…):

$WP+MDSW=[PWD],[Enable/Disable]

[PWD]: PWD of the device

[Enable/Disable]:

0: Normal Pagee
1: GPS page
2: Dialing mode
4: Phone book page
8: Short message page

17. Add head message and Enable/Disable a "beep" sound if alert for the $WP+EMOV:

$WP+EMOV=[PWD],[SMS1],[SMS2],[SMS3],[SMS4],[SMS5],[EMOV Mask], [Enable/Disable beep] ,[Text]

[PWD]: PWD of the device.

[SMS1]: Set the emergency contact phone number 1

[SMS2]: Set the emergency contact phone number 1

[SMS3]: Set the emergency contact phone number 1

[SMS4]: Set the emergency contact phone number 1

[SMS5]: Set the emergency contact phone number 1

[EMSMS Mask]: This setting is based on the bitwise operation. This parameter can specify which quick dial buttons are available. The bitwise definitions are following:

0: Disable
1: SMS 1
2: SMS 2
4: SMS 3
8: SMS 4
16: SMS 5
32: Send a message to Control Center (Base on the primary communication type

[Enable/Disable beep]: 0: Disable beep, 1: Enable beep

[Text message]: maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

18. Add the head function:

$WP+RPHEAD=[PWD],[Head Text]

[PWD]: PWD of the device.

[Head Text]: maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

19. Send text message from device to GPRS server :

$WP+DCMSG=[PWD], "Text"

[PWD]: PWD of the device.

[Head Text]: maximum length is 16 bytes. The text should be put in start quote " and end quote " quote symbol. If it is empty inside the quotes to indicate no text will be transmitted.

Ack: $OK:DCMSG= "Text"

GPRS server receives:

$DCMSG= unit ID, "Text",DateTime.

20. Remote Parking function Enable/ Disable :

$WP+PARK=[PWD],[Enable/ Disable],[Enable/Disable Parking Button]

[PWD]: PWD of the device

[Enable/ Disable]

0: Disable

1: Enable

[Enable/Disable Parking Button]

0: Disable

1: Enable

Note: Once the unit is parking enabling, then configuring "$WP+PARK=0000,1" remotely will renew parking enabling.

Query Status: $WP+PARK=0000,?

21. Mileage function :

$WP+SETMILE=[PWD],[Enable/ Disable],[Set Mileage]

[PWD]: PWD of the device

[Enable/ Disable]

0: Disable

1: Enable

[Set Mileage]

Value of intial mileage

22. Contact list function (→ V1.006Rev49) :

$WP+PHONEBOOK=[PWD],[Index], [Name], [Phone number]

[PWD]: PWD of the device

[Index]: 1~15, 255 to clear all list

[Name]: The text should be put in start quote " and end quote " quote symbol. The maximum length is 16 chars (numerical and characters). Use ""to clear the content.

[Phone number]: maximum length is 16 digits (supporting '+'). Use "" to clear the content.

Note:

1. This page will be displayed after the dialing page.
2. Every time you switch to this page, the first contact information will be displayed.
3. Show the first contact information on the LCD (for ex. first line, the name, second line the GSM number)
4. The empty information will be displayed with empty page with Index number (the empty page will not be skipped)
5. Navigate into the contact list by the C3/C2 button (up/down)
6. Select the contact by P button, and hold this key for 3 seconds to make dialing process
7. The reset function will not erase the phone book information.

23. Pre-defined message function (→ V1.006Rev49) :

$WP+MSGBOOK=[PWD],[Index], [Text]

[PWD]: PWD of the device

[Index]: 1~20, 255 to clear all list

[Text]: The text should be put in start quote " and end quote " quote symbol. The maximum length is 16 chars (numerical and characters). Use ""to clear the content.

Note:

1. This page will be displayed after the Phone book page.
2. Every time you switch to this page, the first message will be displayed.
3. Show the first message on the LCD
4. The empty information will be displayed with empty page with Index number (the empty page will not be skipped)
5. Navigate into the message by the C3/C2 button (up/down)
6. Select the contact by P button, and hold this key for 3 seconds to send the message back to control center.
7. The Reset function will not erase the message list

24. Change the "no phone" message and "emergency SMS " message by an owner msg (→ V1.006Rev49) :

$WP+STDMSG=[PWD],[C button Msg],[SOS Msg]

[PWD]: PWD of the device

[C Button Msg] : The text should be put in start quote " and end quote " quote symbol. The maximum length is 16 bytes

[SOS Msg] : The text should be put in start quote " and end quote " quote symbol. The maximum length is 16 bytes

25. Idle command (if G-sensor does not detect any movement within certain interval then send a idle report) (→ V1.007Rev02) :

$WP+IDLESET=[PWD],[Time Interval],[Mask]

[PWD]: PWD of the device

[Time Internal]: 30~65535 seconds

[Mask]

0: Disable
1: IDLE report logging
2: IDLE report polling
4: Moving report logging
8: Moving report polling
16: Enable Idle beep beep
32: Enable Moving beep

Note:
Report ID 30: Detect the device entering IDLE.
Report ID 29: The G-sensor is triggered during IDLE.

26. Track commands for low speed (→ V1.007Rev04) :

a/

$WP+LOWTRACK=[PWD],[Mode],[Speed Limitation],[Speed Duration],[Time],[Times],[Heading]

[PWD]: PWD of the device

[Mode]

0: Disable
1: Time
5: Heading
6: Time or Heading

[Speed Limitation]: 0~255 Km/Hr

[Duration]: 0~65535 Seconds

[Time]: GPRS UDP/TCP/IP: 5~65535 seconds.

[Times]: Frequency (number of times the report needs to be sent). Effective range is from 0~65535. Set '0' indicating "Continuously tracking.

[Heading]: Direction: 10~90 degree.

b/

$WP+MIT=[PWD],[Time]

[Time]: 0~65535 seconds